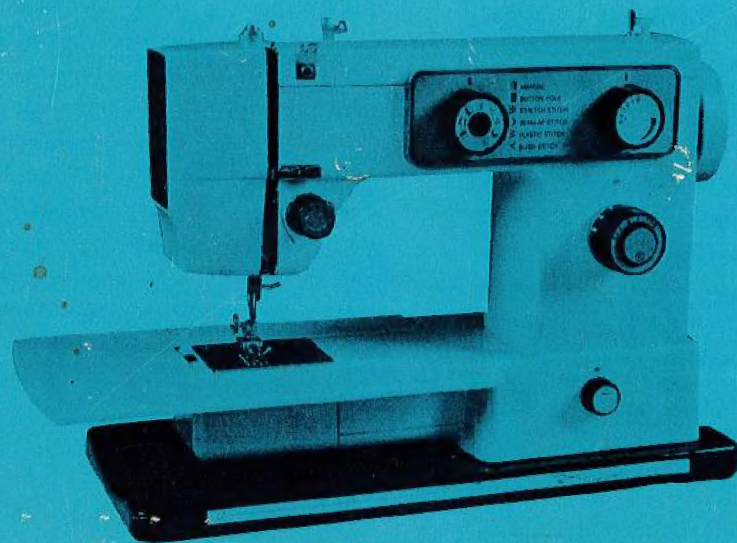


INSTRUCTION

FOR SEWING MACHINE

MANUAL

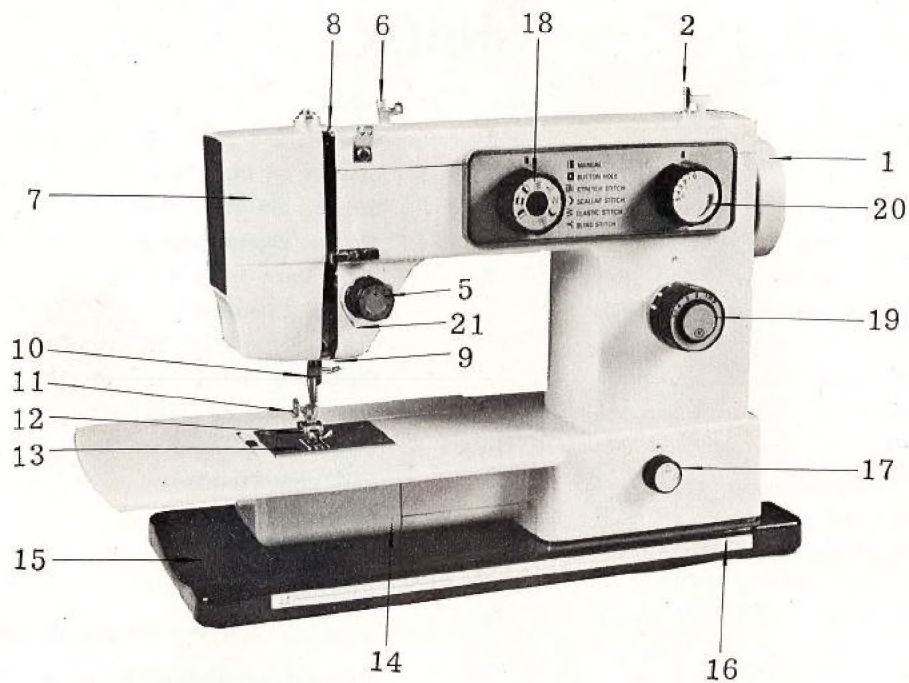


Model 500FA

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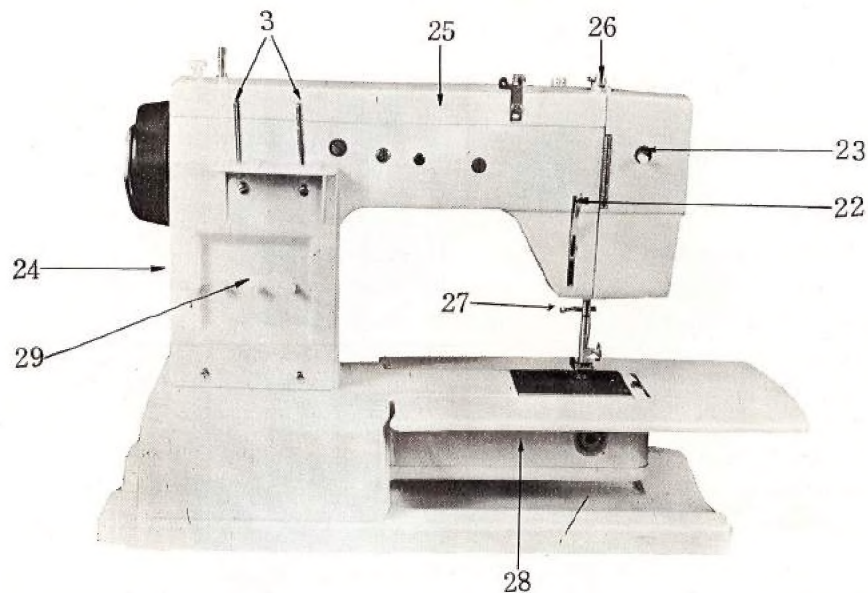
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FEATURES AND PARTS (Front View)

- | | |
|---------------------------------------------------------|----------------------------------------------------|
| 1. Hand Wheel | Screw |
| 2. Bobbin Winder | 12. Presser Foot |
| 3. Spool pin | 13. Needle Plate |
| 4. Pattern panel | 14. Hook Cover |
| 5. Dial Tension Assembly | 15. Bottom Plate |
| 6. Thread Guide (A) and Bobbin
Winder Thread Tension | 16. Ruler (inches and centimeter) |
| 7. Face Plate | 17. Drop feed dial |
| 8. Thread Take-up Lever | 18. Pattern Selector Dial |
| 9. Thread Guide (B) | 19. Stitch Regulator Dial &
Reverse Push Button |
| 10. Needle Bar Thread Guide | 20. Zig Zag Width Dial |
| 11. Presser Foot Brocket Thumb | 21. Thread Take-up Spring |

FEATURES AND PARTS (BACK VIEW)



- 22. Presser Bar Lifter
- 23. Sew Light Switch
- 24. Cover Plate
- 25. Top Plate

- 26. Patch-O-Matic Darning
- 27. Needle Clamp Screw
- 28. Tubular Arm
- 29. Bobbin holder

NEEDLE-THREAD-FABRIC-STITCHING GUIDE

Fabric	Needle No	Machine Stitches Per Inch	Cotton Thread	Mercerized Thread	Silk or Nylon
Extremely heavy tarpaulin, sacking, canvas, duck, etc.	4	6 to 8	10 to 30	Heavy Duty	
Heavy upholstery fabric, ticking, denim, leatherette	3 (18)	8 to 10	30 to 40	Heavy Duty	
Medium heavy drapery fabric, velveteen, suiting, felt, terry, etc.	2 (16)	10 to 12	40 to 60	Heavy Duty	
Medium broadcloth, percale, gingham, linen, chintz, taffeta, sheer wool, shantung, etc.	1 (14)	12 to 14	60 to 80	50	A
Sheer voile, lawn, dimity, crepe, handkerchief linen, plastic film, etc.	0 (11)	14 to 16 (Plastic film) 8 to 10	80 to 100	50	A
Very sheer chiffon, batiste, lace, organdy, ninon, net, marquisette, etc.	00	16 to 20	100 to 150	50	A

WINDING THE BOBBIN

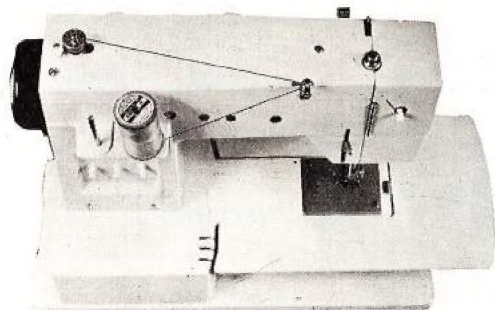


Fig. 3

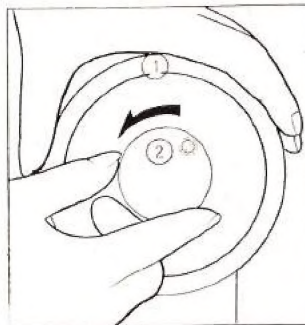


Fig. 4

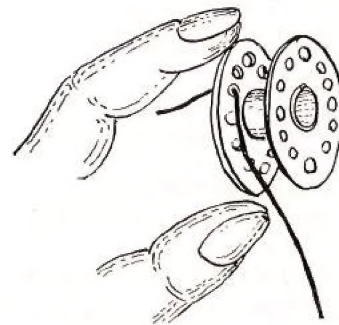


Fig. 5

Disengage the hand wheel (1, Fig. 4) from the stitching mechanism by turning the clutch (2, Fig. 4) toward you or counter clockwise. Place a spool of thread on one of the spool pins and lead thread through the arm thread guide (3, Fig. 3). Run end of thread through a hole in the bobbin edge and place bobbin on spindle of bobbin winder (4, Fig. 3) fitting the notch on bobbin over small pin on spindle. Push bobbin (5, Fig. 3) to the right, and hold thread end loosely then start machine slowly.

Bobbin will stop winding when it is filled. Turn clutch away from you until sewing mechanism is again engaged so that needle moves when you turn the hand wheel. Break off loose thread end used to start the winding.

UPPER THREADING

1. Turn the hand wheel toward you to raise the take-up lever to its highest position.
2. Place a spool of thread on the spool pin.
3. Lead the thread through the upper arm thread guides. (A,B, Fig. 6)
4. Down and between tension discs (C, Fig. 6) from Right to Left.
5. Draw the thread up through the check spring (D, Fig. 6) and with a slight tug into the hook, (E, Fig. 6).
6. Then up through the eye of the take-up lever (F, Fig. 6) from right to left.
7. Lead thread down, through the thread guide (G, F, Fig. 6) then through the needle bar guide (I, Fig. 6).
8. Thread needle from front to back, drawing it through about 3 or 4 inches. Hold the end of the upper thread loosely and turn the hand wheel toward you until the needle goes all the way down and comes back up. A loop (Fig. 7) will be formed over the upper thread which then can be pulled out straight. Place both thread ends under the presser foot and draw toward the back of the machine, leaving both threads three or four inches long.

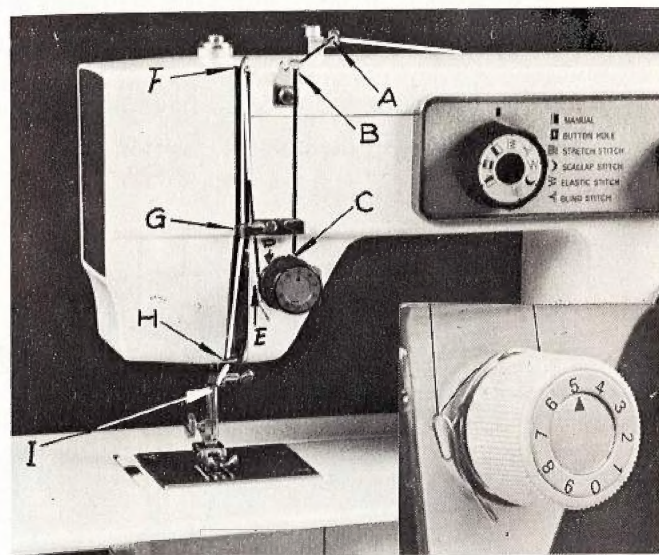


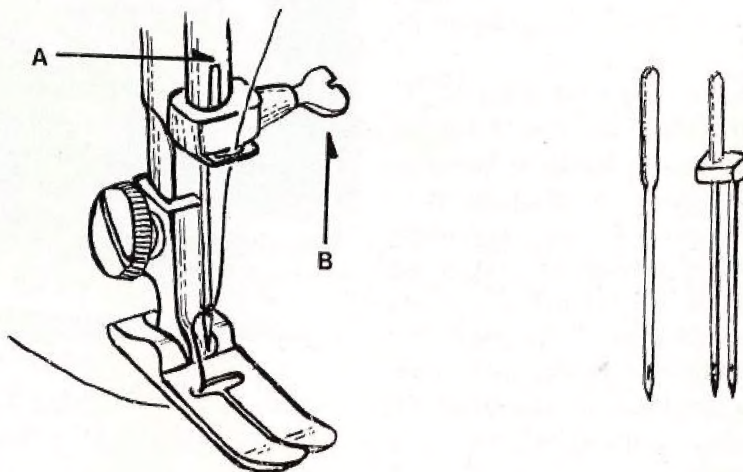
Fig. 6

Fig. 7

SETTING THE NEEDLE

Raise the needle bar (A) to its highest point, by turning hand wheel toward you by hand. Loosen needle clamp screw (B) and then needle can be removed or replaced. When replacing needle (Flat Side to BACK) in needle clamp push it upward as far as it will go into needle clamp hole. Tighten the Needle clamp screw (B) securely with a screw driver.

After changing the needle, make one complete revolution of the hand wheel by hand to be sure the needle is in the correct position.



THREADING THE BOBBIN CASE

Step 1 (illustrated in Fig. A). Hold bobbin case between thumb and forefinger of left hand, so that the slot in the edge of the bobbin case is on top, take the bobbin between thumb and forefinger of right hand so that the thread on top leads from left to right. Step 2. Insert bobbin into bobbin case, pull the thread into the slot of the bobbin case as shown in Fig. B, and draw it under the tension spring and into the fork-shaped opening of the spring as shown in in Fig. C.

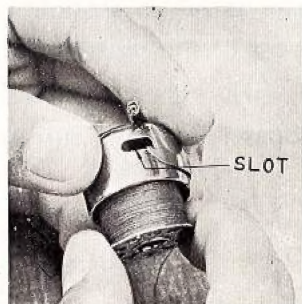


Fig. A

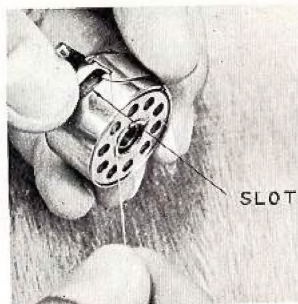


Fig. B

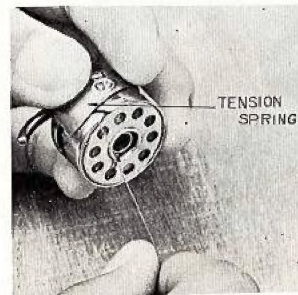


Fig. C

PLACING BOBBIN CASE

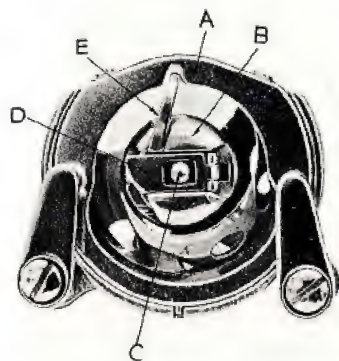


Fig. 8

Raise needle bar to highest position, and lift hinged cover plate. (See 15 Fig. 1) Hold the bobbin case latch (D, Fig. 8), between the thumb and forefinger of the left hand, with at least three inches of thread running from the top of the bobbin case to the right. Insert and center the bobbin case on the stud of the shuttle body, (C). Be sure the bobbin case finger (E) is opposite the shuttle race notch, (A). Press the bobbin case (B) into the shuttle as far as possible until latch catches on the center post of the shuttle. Then release the bobbin case latch, (D). Press bobbin case again after latch has been released to make sure the bobbin case is locked securely. Close the cover plate.

ADJUSTING THE TENSIONS

Always adjust the upper tension with the presser foot down, as the tension is released when it is raised. To increase the tension on the upper thread, turn dial (Fig. 9) to the right. To decrease, turn to the left.

Before adjusting lower tension be sure that the machine is threaded properly. When necessary to change the bobbin tension, turn small screw (Fig. 10) on side of the bobbin case clockwise to tighten, counterclockwise to loosen.

When the upper tensions are properly balanced, a perfect stitch will be formed with both threads interlocking in fabric (Fig. 11).

When the upper tension is too tight, the lower thread is pulled up over the upper thread which is lying flat on the fabric (Fig. 12). When the upper tension is too loose, the upper thread forms loops over the lower thread lying flat on the fabric (Fig. 13)

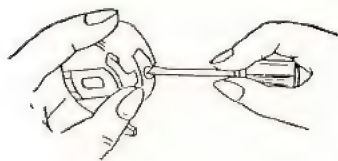


Fig. 10

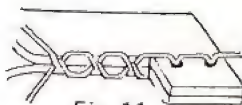


Fig. 11



Fig. 12



Fig. 13

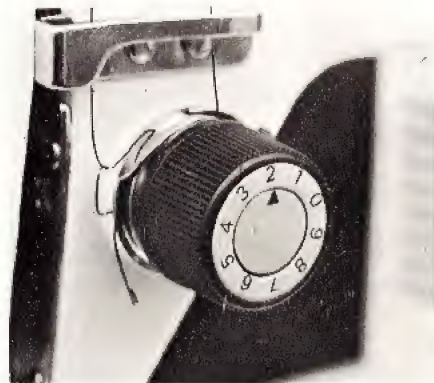


Fig. 9

ADJUSTING PRESSURE AND FEEDING OF FABRIC

General Sewing. Usually for normal sewing the pressure bar cap or darning release, (B, Fig. 14) is at its lowest position and the drop feed knob is turned to “ Δ ” position, (Fig. 15).

Sewing Thin or Light Weight Fabrics. When lighter pressure is required to sew satisfactorily on thin silk or flimsy material, the pressure cap should be about halfway down. Release all the way by pressing the snap lock, (A, Fig. 14) and then press cap (B) down again to halfway spot.

Darning and Mending. In order to move the fabric freely in any direction for darning and mending, release the pressure cap (B, Fig. 14) completely by pressing down on the snap lock, (A, Fig. 14)

Turn drop feed control (Fig. 15) to “ ∇ ” position. This will drop the feed well below the needle plate. To return feed to normal position, turn knob to “ Δ ” position.

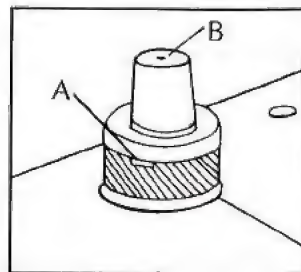


Fig. 14

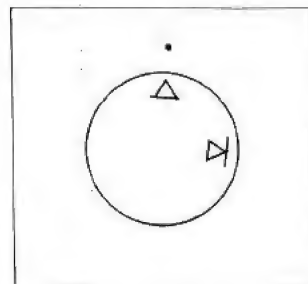


Fig. 15

PREPARING TO SEW

Have take-up lever at highest point before starting to sew. Do not try to help the feeding by pulling the material as this may deflect the needle and cause it to break.

NEVER run machine without material under the presser foot.

Place material and threads in position under the presser foot and lower the presser foot.

Turn the hand wheel toward you until the needle is at its highest point. You are now ready to begin sewing. By having the needle at its highest point, it is not necessary to touch the hand wheel to start the machine. You merely press the control. The speed of the machine is regulated by increasing or decreasing the amount of pressure exerted on the control.

REMOVING THE WORK

Be sure to stop the machine when the thread take-up lever and needle bar are at the highest position. Now raise the presser foot and draw the fabric back and to the left, Fig. 16-A and B, and pass the threads over the thread cutter. Pull down slightly, holding thread in both hands, so as not to bend the needle. Leave the ends of thread under the presser foot.

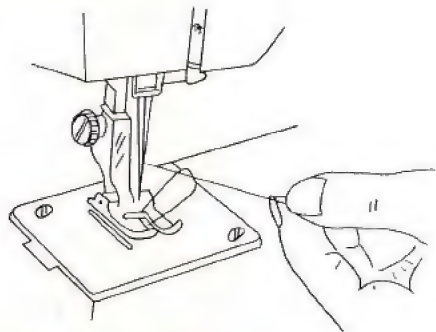


Fig. 16-A

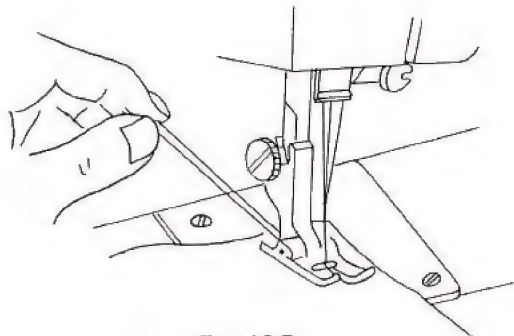




Fig. 16-B

APPLICATION OF THE OVERLOCK STITCH

Pattern:  (5)

Length: 5

Width: 5

Feed Dog: 

Pressure: Normal

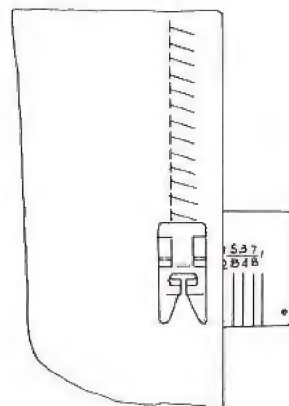
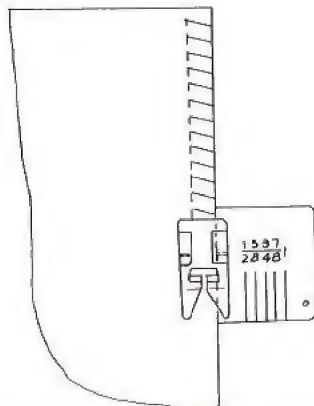
Foot: Zigzag Foot

Seams: On most knits, a $\frac{1}{4}$ inch finished seam, as ultra overlock stitch, is more desirable than a $\frac{5}{8}$ inch opened seam allowance. This stitch can create a neater, more professional finish, eliminate bulky seams, prevent curling, permit the garment to "give" under stress, and at the same time, it cuts down on the amount of work involved in making a garment.

The ultra overlock stitch is excellent for stretch fabrics such as, sweater knits, bathing suit knits, and cotton knits. It has the greatest strength and elasticity of all.

For patterns with $\frac{1}{4}$ inch seam allowance: Feed the fabric such that the needle goes over the raw edge of the fabric when it swings to the right.

For patterns with $\frac{5}{8}$ inch seam allowance: Feed the raw edge of the fabric along the etched guide line " $\frac{1}{2}$ ", then trim away the excess fabric close to the stitching.



TWIN NEEDLES UPPER THREADING AND SEWING

1. Be sure zigzag needle plate and presser foot are in place.
2. Follow threading instructions for single needle with these exceptions:
 - a. Place two spools of thread, matching or contrasting in color, one on each spool pin.
 - b. Lead both threads through arm thread guides.
 - c. Bring threads down and around tension discs with one thread passing between the back discs and the other between the front discs.

Now treat both threads as one until you reach the needle eye.

- d. Pass one thread through each needle eye (Gid. 18).
3. The maximum zigzag stitch width that can be sewn when using twin needle is at the number 3 setting of the zigzag width control. Any position above the number 3 position will break the twin needle.
4. Straight stitching and decorative stitch designs can be produced in the same manner as for single needle sewing except for the maximum zigzag width.

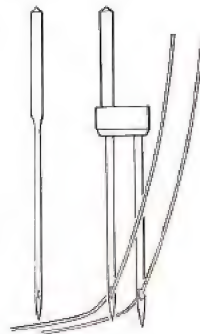


Fig. 18

SAMPLES OF CREATIVE EMBROIDERY

- "A" Sew a few stitches at 5 width then turn knob back to O for a short period. Count, if necessary, to establish a rhythm. (A, Fig. 20)
- "B" Move the zigzag width control slowly back and forth between the number 2 and number 0 (B, Fig. 20)
- "C" Gradually move the zigzag width control from 0 to 5 and instantly return to O. Then, repeat likewise. (C, Fig. 20).
- "D" Set zigzag width at 5, stitch length at 2. Sew a few zigzag stitches. Turn the drop feed knob (Fig. 15) to " Δ " position for 3 or 4 stitches then normal position again. By operating the drop feed knob rhythmically it is not necessary to count stitches. (D, Fig. 26).
- "E" Set drop feed knob at " Δ " position and zigzag width control at the number 5 position. Take 3 or 4 stitches, leave needle in fabric and pivot fabric on needle to make next daisy petal. Continue until flower design is completed. Lock threads by setting stitch width at O and sewing 3 or 4 stitches in center of design. (E, Fig. 20).

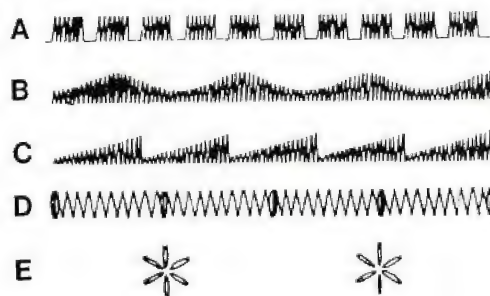


Fig. 20

CREATIVE EMBROIDERY


Be sure zigzag presser foot and zigzag needle plate are in place.

1. Set pattern selector (C, Fig. 17) at "1" position.
2. With the zigzag width control (D, Fig. 17) set at the Number 5 and stitch length control (A, Fig. 17) as near 0 as possible without stopping the feeding action, a satin stitch is produced (Fig. 19).
4. With the machine set for a short stitch length, different designs can be made by turning the zigzag width control back and forth between 0 and 5 or any other combinations of widths. Try setting the zigzag width control (D, Fig. 17) at the first line and the various other lines. Set a rhythm for yourself and then proceed. After a while you will become quite skillful, varying your designs by the speed of the machine, stitch length and manipulation of the zigzag width control.



Fig. 19

EMBROIDERING WITH A HOOP

It is easy to follow a stamped design or to work free hand when embroidering or monogramming. (Fig. 21) Release the pressure from the foot by pressing down the snap lock on the darning. Turn the drop feed knob to “” position (Fig. 15).

Stretch the fabric in an embroidery hoop, and place under the needle after removing the presser foot. Set the stitch width at the size you prefer and lower the presser bar lifter.

Then operate the machine at a rather high speed while moving the hop slowly with both hands. Work carefully and be sure to keep fingers out of the path of the needle. Should you encounter skip stitches the fabric is not stretched tight enough or a darning spring is needed (see attachments available from your dealer illustrated in the back of this book).

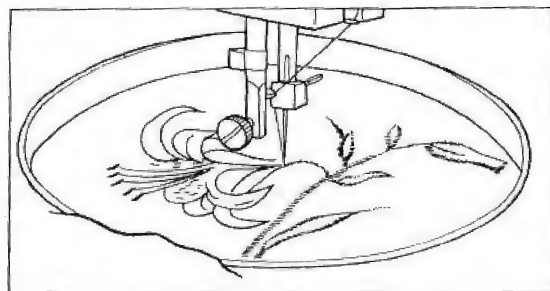


Fig. 21

MAKING BUTTONHOLES

1. Turn the hand wheel toward you to raise the needle. Remove the usual presser foot and attach the buttonhole foot shown in Fig. 22).
2. Turn the dial tension regulator (Fig. 9) clockwise in order to get slightly tighter thread tension.
3. Set the stitch length dial as close to 0 as possible without stopping the feeding-action. It is suggested that the stitch length dial be set to produce the desired stitch by making a few tests on a sample swatch of the material on which the buttonhole will be made.
4. Mark on the cloth, by pencil or tailor's chalk, a center line of buttonhole and also mark on the line the length of the buttonhole desired, $3/8''$ — $1/4''$ longer than the outside diameter of the button.
5. Place cloth under the buttonhole foot with the line marked on the cloth in the center of the buttonhole foot.

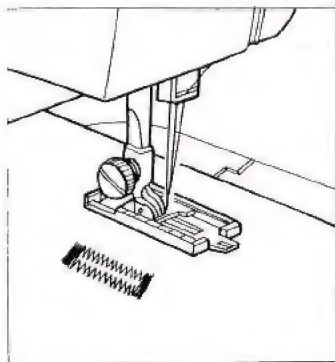


Fig. 22

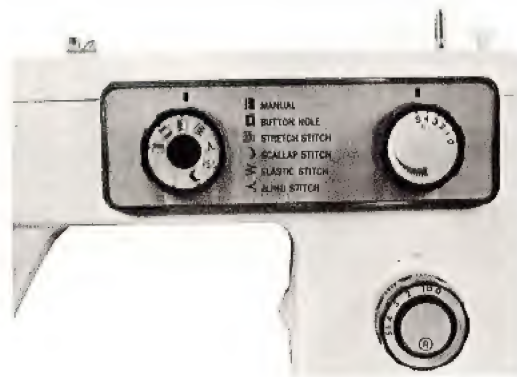


Fig. 23

6. Turn the pattern selector (C, Fig. 17) to marking " 2 " position, and start to sew left side along the line.
7. Stop with the needle on the left side of the stitch (Step 1, Fig. 23).
8. Raise the needle, and turn the pattern selector to marking "3" and sew a few stitches to make the bar tack. (Step 2).
9. Turn the pattern selector to marking "4" and sew the right side of the buttonhole guiding the cloth so that it sews parallel to the left side. (Step 3).
10. Return the pattern selector to marking "3" again and take a few stitches making the bar tacks to close the other end of the buttonhole. (Step 4).
11. Cut a slot in the center of the buttonhole with the seam ripper.

NOTE: Make sure that the pattern selector is firmly positioned in every marking "2" "3" or "4".

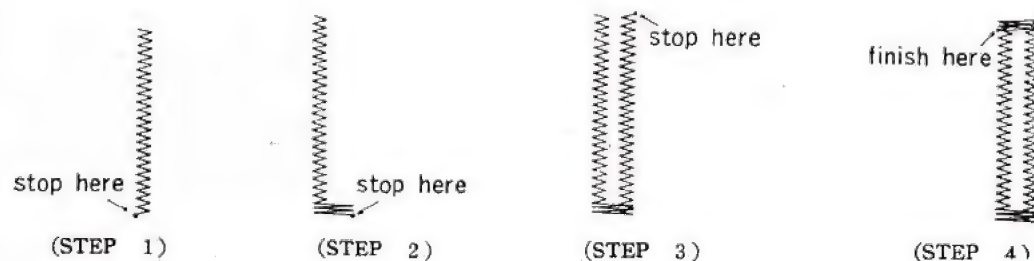


Fig. 23

TO REGULATE THE LENGTH OF STITCH

The length of the stitch is regulated by the stitch length dial (A, Fig. 17). Turn the dial to the right to lengthen and to the left to shorten the stitch. Near "0" is the shortest stitch and "5" is the longest.

Stitch Length Chart (Approximate)

Figures on dial	0	1	2	3	4	5
Number of stitches per inch	No Feeding	36	20	12	9	7

SEWING IN REVERSE

When you wish to sew in reverse to tie the threads at the beginning or the end of a seam, press the reverse button (B, Fig. 17) as far as it will go. The machine will sew backward as long as the button is pressed.

STRAIGHT AND ZIGZAG SEWING

For all ordinary manual sewing, straight or zigzag, make sure that the pattern selector (C, Fig. 17) is set at "straight & zigzag" stitch pattern (Marked 1).

By turning the zigzag width control (D, Fig. 17) clockwise from 0 toward 5, zigzag width will be increased, and by turning it counter-clockwise, it will be decreased, and at "0" position, the machine will sew straight stitches.

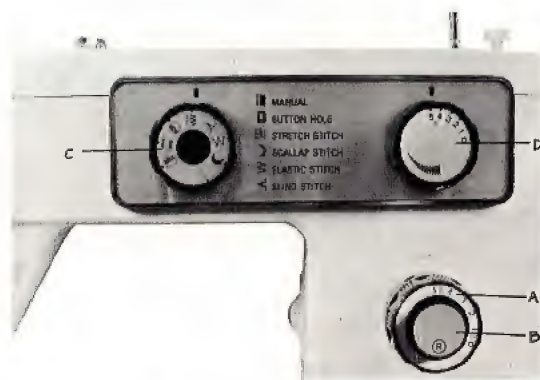



Fig.17

SEWING ON BUTTONS

1. Remove presser foot and replace with special purpose button sewing foot (Fig. 24)
2. Turn drop feed knob to “” position (Fig. 15), pattern selector (C, Fig. 17) to “1” position and zigzag width control (D, Fig. 17) to “0” position.
3. Place the button so that it comes directly under the presser foot and the needle enters the left hand hole of the button.
4. Set the zigzag width control to produce a zigzag stitch until the needle enters the right hand hole of the button. Turn the balance wheel slowly by hand to be sure the needle clears both holes in the button. Correct width if necessary.
5. When needle goes into the center of each hole, run the machine at a medium speed, making five or six stitches, stopping with the needle in the left hole.
6. If you wish, you may place a rounded toothpick over the button to fabric in the regular way. Remove the toothpick and wind thread under button forming a shank to fasten.

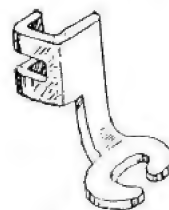
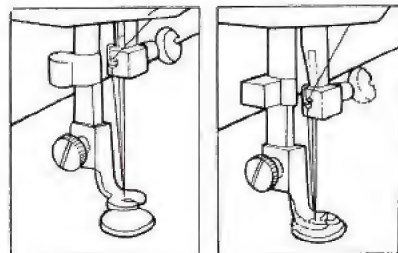


Fig. 24



STRAIGHT STRETCH STITCH

Pattern:  (5)

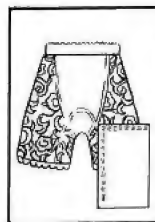
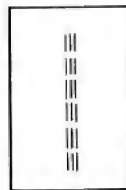
Length: 5

Width: 0

Feed Dog: 

Pressure: Normal

Foot: Zigzag foot




This stitch may be used on knits and wovens in areas of stress as a reinforcement stitch. It is excellent for curved seams such as armholes and crotch seams. For active wear such as ski pants and girdle fabrics which endure a lot of stress in bending and stretching, this stitch may be used for seaming throughout the garment.

CAUTION — It is difficult to remove this stitch from fabric. Pre-fit garment before using this stitch.

• TOPSTITCHING

Because this stitch is heavier than an ordinary straight stitch, it is ideal for top-stitching, particularly on knits.

MULTIPLE ZIGZAG STITCH

Pattern:  (7)

Length: 5

Width: 5

Feed Dog: 

Pressure: Normal


Foot: Zigzag foot

This stitch is useful when replacing worn blanket bindings for both a decorative and durable finish, and when overcasting an edge to prevent fraying.

When applying elastic waist bands to skirts and dresses be sure to stretch the elastic as it is applied to insure fullness required in the garment. When sewing a zigzag stitch on soft or sheer material it will prevent puckering.

There are hundreds of other uses which will become apparent as you use the machine.

BLIND STITCH HEM

Pattern:  (8)

Length: 3-4

Width: 4-5

Feed dog: 

Pressure: Normal

Foot: Zigzag Foot

Blind stitch hems provide a durable hem finish that is almost invisible and comparable to hand sewing.

Prepare the garment in the same manner as for hand hemming.

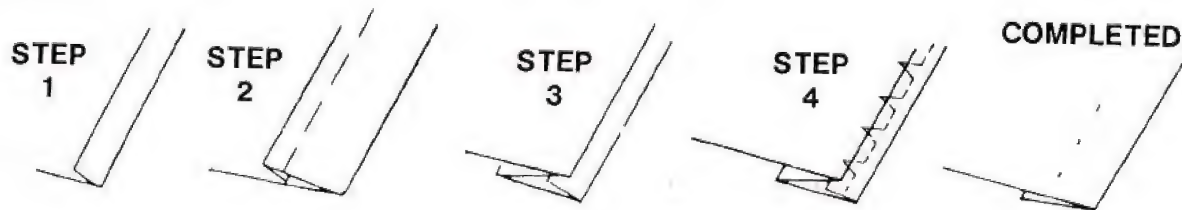


Fig. 27

- Step 1. (Fig. 27). If hem with folded edge is used make first fold $\frac{3}{8}$ " deep.
- Step 2. Turn hem to the depth desired and baste $\frac{1}{4}$ " from upper edge. Press in place.
- Step 3. Fold hem back toward right side of garment leaving $\frac{1}{4}$ " extended.
- Step 4. Place material under presser foot, sew with stitch length set to suit material being sewn and make a side wise stitch about every $\frac{3}{4}$ " of an inch of sewing.

SCALLOP STITCH

Pattern:) (6)

Length: 0.5—1.5

Width: 5

Feed Dgo:

Pressure: Normal

Foot: Zigzag Foot

The scallop stitch particularly works out nice stitches to decorate table cloth, sleeve fringe, stole and the like. And, when sewing on the edge, it is easy to have a neat trimming with removal of redundant material just close to those stitches.



MANUAL OPERATION

Be sure standard zigzag presser foot and zigzag needle plate are in place and machine is set for manual operation. Use for:

Overcasting Worn Edges

Zigzag stitch along the worn edges, catching the fabric as the needle swings to the left, and allowing the needle to just pass over the edge of the fabric on the right (Fig. 29).

Patching

Machine bastes patch into place by placing fabric under hole or worn area which has been cut away. Then zigzag stitch the patch into place by overcasting around edge of hole.

Applique

Fig. 28-Baste design to fabric and zigzag stitch following the shape of the design outlining it entirely and remove excess material on the outer edge by trimming it away after stitching. Fig. 30-Baste design to fabric and overcast a zigzag stitch around the design outlining it entirely.

Hundred of other uses will become apparent as you continue to use the machine. Try the multiple zigzag stitch for these operations. Also, for best result set speed control slower when sewing around contours and faster for straight lines.

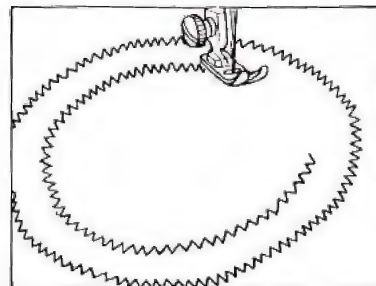


Fig. 28

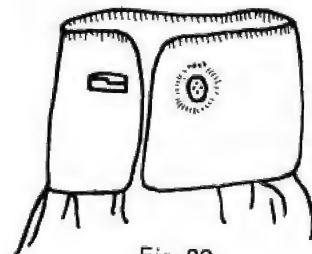


Fig. 29

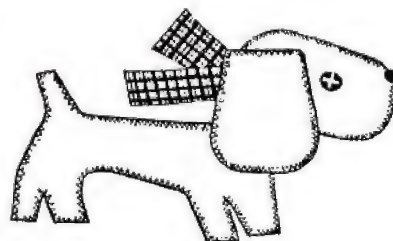


Fig. 30

THE ADJUSTABLE CORDING AND ZIPPER FOOT

This attachment is used to make and insert covered cording and to sew in zippers. Loosen thumb screw to slide foot to either right or left of needle.

CORDING. Fold bias strip of fabric over cord. Loosen thumb screw and set foot so needle is centered in needle hole. Machine bastes cord in place (Fig. 31).

To sew covered cord to material, reset adjustable foot so needle stitches closer to cord, and on edge of base fabric.

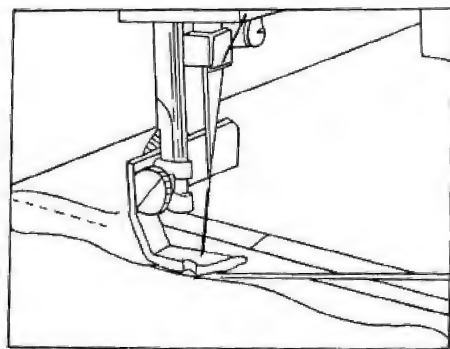
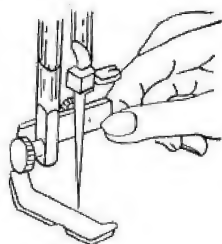


Fig. 31

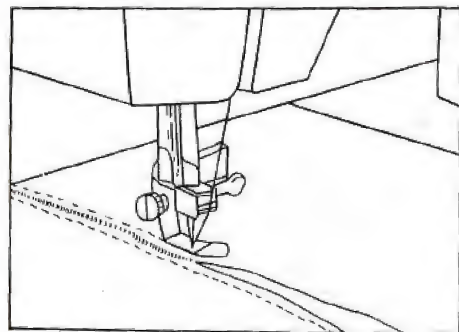


Fig. 32

SEWING IN ZIPPER

Loosen thumb screw and slide foot so needle enters center of needle hole. Guide metal of zipper along edge of foot (Fig. 32). Stitching should be close to zipper to allow easy opening and closing. Adjust to sew from either right or left side, whichever is more convenient.

QUILTING GUIDE

Use this guide for making parallel rows of straight or decorative stitching. Attach standard presser foot. Slip U shaped holder on guide under presser foot thumb screw from the back and tighten screw (Fig. 34). Adjust the curved bar for the distance desired between rows of stitches and set so it presses slightly on the fabric. By letting the guide ride on the previous stitching line, successive rows will be an equal distance apart (Fig. 34).

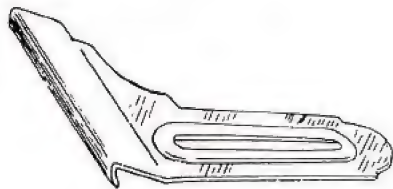


Fig. 35



Fig. 36

SEAM GAUGE OR CLOTH GUIDE

Use the seam gauge as a guide for straight seams and even rows of top stitching along edge of fabric (Fig. 33). Fasten Gauge (Fig. 35) with accompanying screw (Fig. 36) in threaded hole in bed of machine. Adjust to desired width.

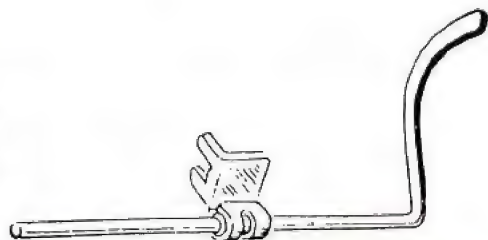


Fig. 33

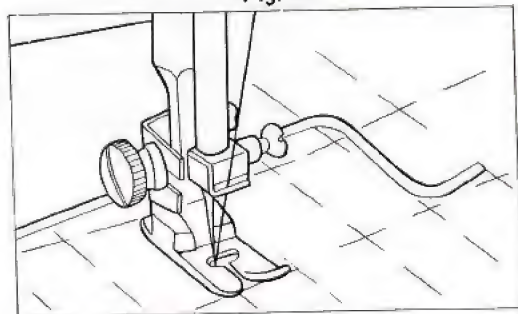


Fig. 34

CLEANING AND OILING THE SHUTTLE (See Fig. 37 and 38)

The stitch forming mechanism occasionally becomes clogged with loose threads and lint. This will interfere with the efficient operation of the machine. Cleaning and removal of the lint will safeguard the performance. To remove the shuttle assembly, proceed as follows:

1. Turn the balance wheel until the needle reaches its highest position. Tilt head back on its hinges.
2. Remove bobbin case (A , Fig. 37).
3. Turn the two shuttle race cover clamps (B) outward and remove the shuttle race cover (C) and shuttle body (D).

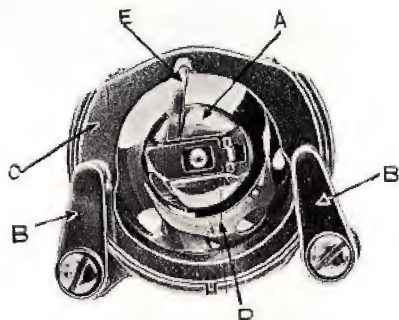


Fig. 37



Fig. 38

4. Clean the shuttle race, the shuttle and shuttle race cover by removing all threads, lint, etc.
5. Apply a drop of oil with finger tip to outer edge of shuttle.

When the cleaning has been completed, proceed as follows to replace the shuttle assembly:

1. Turn the balance wheel until the needle reaches its highest position.
2. Place shuttle body, (D), against shuttle driver and adjust into position.
3. Replace shuttle race cover, (C), fitting pin at lower edge into notch, and lock into position with shuttle race cover clamps, (B), making certain the clamps have been snapped securely into position.
4. Put bobbin into bobbin case.

CARE AND MAINTENANCE OF YOUR MACHINE

How to Oil Your Machine

your machine should be oiled occasionally to keep it operating smoothly, how often depends on the amount of sewing you do.

Before oiling the upper part of the sewing unit at points indicated by arrows in Fig. 39 turn hand wheel toward you until the take-up lever is at its lowest point.



Fig. 39

To oil mechanism under bed of machine, tip the head back on its hinges and oil all moving parts indicated by arrows Figures 40 and 41 and red spots on machine.

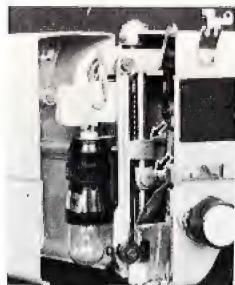


Fig. 40

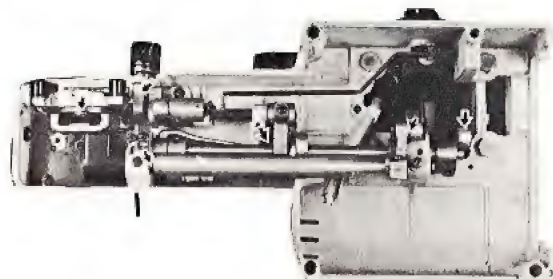
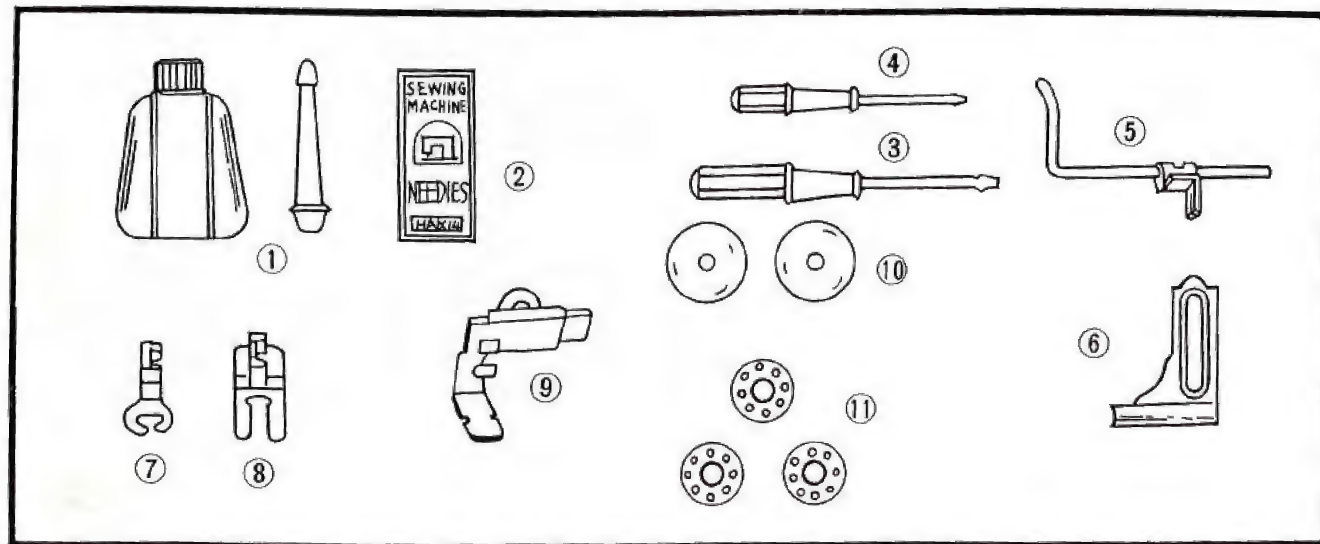


Fig. 41

HOW TO REPLACE THE LIGHT BULB

Open Face (Fig. 40). Unscrew bulb and insert new one. For long life and correct size, be sure it is a genuine [REDACTED]

ACCESSORIES



1. Plastic Oiler (sealed and filled).
2. Package of Needles (3 Straight and 1 Twin Needle).
3. Large Screw Driver.
4. Small Screw Driver.
5. Quilter Guide.
6. Cloth Guide with Thumb Surew
7. Button Sewing Foot.
8. Buttonhole Foot.
9. Zipper Foot.
10. Felt Washers(2) (for spool pins).
11. Bobbins(3).

TROUBLE CHART

Trouble	Probable Cause	Correction
If Machine Binds	Thread or lint in raceway	<p>1— With take-up lever in highest position, tilt head back on hinges and remove bobbin case.</p> <div data-bbox="771 326 1485 606"> </div> <p>2— Turn clamps outward and remove race cover. 3— Remove hook. 4— Clean thread and lint from all parts, including race. 5— Run a drop of oil along rim of hook. 6— Replace shuttle, then race cover. Snap clamps into place. 7— Grasp threaded bobbin case by latch and replace, fitting tongue into notch of race cover.</p>

Trouble	Probable Cause	Correction
Skipping stitches	Bent needle	Discard and replace.
	Needle placed incorrectly in clamp	See instruction, page 10.
	Too fine a needle for thread being used	See needle and thread chart, page 5.
Irregular stitches	Upper thread tension too loose	Tighten upper tension.
	Improper threading	See threading instruction, page 8 and 9.
	Bobbin not wound evenly	Rewind bobbin.
Uneven stitches	Pulling or holding material	Avoid pulling or holding material, just guide it.
	Not enough tension on upper thread	Increase tension.
	Poor quality thread	Try different thread.
	Needle too fine for thread being used	See needle and thread chart, page 5.

Trouble	Probable Cause	Correction
Upper thread breaking	Improperly threaded	Refer to threading instructions, see page 8 and rethread machine.
	Too much tension	Loosen tension on upper thread by turning thread tension knob to lower number.
	Starting with take up in incorrect position	Always start sewing with take up lever in highest position.
	Improper setting of needle	Refer to needle setting instructions, see page 10.
	Bent or eye of needle too sharp	Try a new needle.
	Bent or blunt needle	Discard all blunt or bent needles and replace with new.
Material puckering	Tensions too tight	See tensions adjustment, page 14.
	Dull needle	Change needle.
	Stitch length too long	Reduce stitch length.

ELECTRICAL EQUIPMENT

a. Plug Extension cord into your wall outlet, and connector to terminal box on machine as shown.

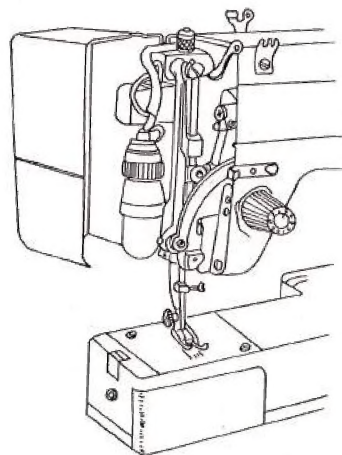
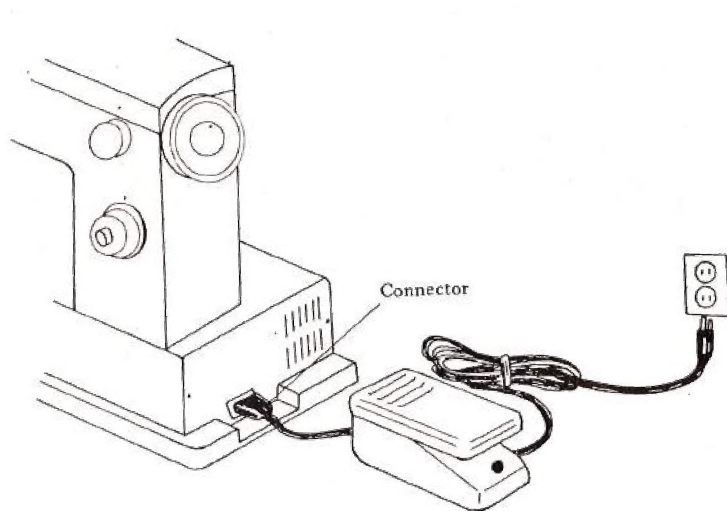
b. Lighting

Turn the Sewlight Switch (23) to switch on or off.

c. Changing the Light Bulb.

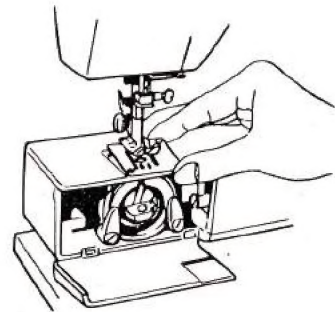
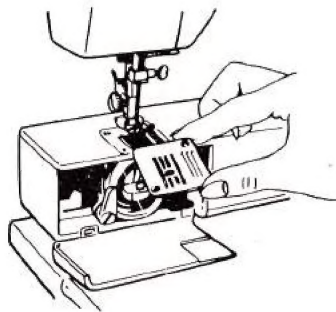
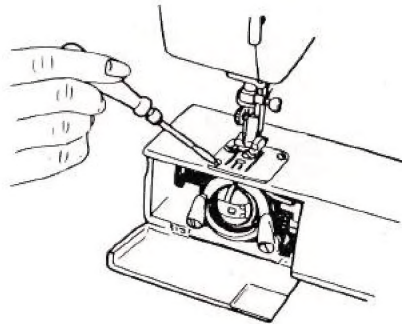
Swing the Face Plate (7) to the left. Bulb is now easily accessible and can be removed just as you would on ordinary light bulb.

NOTE: When not in use, please be sure to disconnect the cord plug from electrical outlet.



HOW TO REMOVE THE NEEDLE-PLATE

- a) Move the Needle to its highest by turning the Hand-Wheel (1) toward you.
- b) Open the Hock-Cover towards you.
- c) Remove the Needle-Plate by screwing off the screws.



CONVERTIBLE EXTENSION PLATE

The built-in, snap-up extension plate quickly converts the sewing platform plat bed to tubular arm.

Attaching the Extension Plate

For ordinary sewing, the extension plate will make your work easier.

Carefully place the extension plate on the free arm, levelling the plate with the free arm, inserting pins on plate into corresponding holes on base of arm.

Grasp locking screw on underside of extension plate, press screw toward corresponding hole on end of arm, turn screw to hold plate firmly.

